TORONTECH

SOIL MILL DP50

- Feed size : <2mm
- Final fineness: <75 Âµm (95%)
- Speed : 800 rpm

The Soil Mill DP50 is a precision grinding tool. Unlike other vertical disc mills on the market, its discs are arranged horizontally, allowing for rapid size reduction to under 75 microns for moderately hard and brittle samples.

The reduction process occurs between a stationary mill disc and a moving mill disc. Its ease of use, efficient milling, and minimal residue in the mill chamber make the DP50 an excellent option for conducting large-scale environmental soil tests.

APPLICATIONS

Applications

Soil, building materials, nuclear ore, cement, concrete, cinder, coke, glass, porcelain, minerals, refractory clay, granite, and monohydrallite, among others.

Soil Mill

Working Principle

The comminution effects occur due to the pressure and friction forces created when a moving disc rotates against a fixed disc located just below it. The sample enters the mill chamber from the center of the discs, where it undergoes initial crushing.

Subsequently, it is propelled to the outer regions of the mill discs by centrifugal force for further grinding. After the milling process, the reduced particles drop into a collecting pan located around the outer edges of the milling discs, ensuring that the milling discs remain clean and the sample is collected efficiently.

Soil Mill DP50 Component

FEATURES

- Achieve consistent grinding results by finely adjusting the gap width between the discs.
- Perform both preliminary and fine grinding as needed.
- Easy-to-clean mill chamber with a hinge design.
- Extended lifespan of milling discs.
- Use discs made from various materials for contamination-free grinding.
- Incorporate a dust-proof design for added protection.

THEORY & METHOD

Analytical Precision with the Soil Mill DP50

Any professional lab relies on a soil mill to guarantee every tiny speck in the jar is identical. Without top-shelf equipment, sample prep is a massive headache. Anyone who has spent hours manually crushing rocks knows old-school hand grinding brings random mistakes that completely ruin data.

At Torontech, our budget-friendly Soil Mill DP50 relies on proven science that actually works in the field. By putting this machine on the job, you can take a rough 2-millimeter feed size, whether concrete, cinder, glass, or refractory clay, and turn it into a super-fine, smooth-as-silk powder.

We get 95 percent of your sample down to an incredibly tiny size of less than 75 microns, leaving zero clumpy, uneven bits behind. This total control ensures your final results look like sheer perfection:

- **Carbon and Nitrogen Consistency:** A properly set up **soil mill** creates a much more even mix than shaking a basic sieve. It stops isotope measurements from jumping all over the place, providing the steady, reliable data scientists want to see.
- **Heavy Metal Analysis:** Heavy-duty grinding means fewer weird, inconsistent readings. You will see much more dependable Lead, Copper, and Zinc levels than hacking away with a basic mortar and pestle.
- **Geotechnical Disaggregation:** For geotechnical teams, this machine easily beats hand processing. It ensures crumbly rocks and minerals are totally pulled apart so evaluations reflect actual physical realities.

Operating Principle: Horizontal Disc Grinding

The Soil Mill DP50 chews through material using a highly efficient horizontal disc arrangement.

An active, moving disc spins energetically against a stationary disc sitting securely right below it. Material drops into the center chamber, and strong centrifugal force pushes the sample to the outer edges for aggressive size reduction. Powered by a solid 550-watt motor spinning at 800 revolutions per minute, it breaks things down fast without overheating your samples.

You have total control over how this soil mill strikes the material. You can manually adjust the disc gap width from 0 to 25 millimeters to get exactly the grind you need. To ensure unwanted metal flakes do not ruin your sample, the DP50 utilizes specialized grinding sets made from Zirconium oxide, Aluminium oxide, and Agate for a completely contamination-free process.

Afterward, the powder drops neatly into a spacious 2-liter collecting pan. Add in the easy-to-clean hinge design and protective dust-proof casing, and you deliver gold-standard results every single time without stretching your budget.

TECHNICAL SPECIFICATIONS

Feed size	<2mm
Final fineness	<75 μm (95%)
Speed	800 rpm
Collecting pan volume	2L
Grinding gap width adjust range	0-25mm
Grinding sets material	Zirconium oxide, Aluminium oxide and Agate
Rated power	550W
Power supply	220V,50/60Hz (110V Also available upon request)

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